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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,527	10/24/2003	Lewis Michael Popplewell	IFF-24-1	2313
48080 7590 01/19/2007 INTERNATIONAL FLAVORS & FRAGRANCES INC. 521 WEST 57TH ST NEW YORK, NY 10019			EXAMINER ROGERS, JAMES WILLIAM	
			ART UNIT	PAPER NUMBER
			1618	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/693,527	Applicant(s) POPPLEWELL ET AL.	
	Examiner James W. Rogers, Ph.D.	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18 and 25 is/are rejected.
- 7) ☒ Claim(s) 18 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment to the claims filed 12/07/2006 have been entered. Any rejections from the previous office action dated 06/07/2006 not addressed below have been withdrawn.

Claim Objections

These new objections were necessitated by amendment. Claims 18 and 25 are objected to because of the following informalities: claim 18 recites "emulsifier" twice consecutively and claim 25 also recites "oil" after the word "spearmint" twice consecutively. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

This new rejection was necessitated by amendment. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically the claim recites that the amount of flavor oil is about 98 percent, the amount of emulsifier is about 2 to 30% and the amount of cellulose is about 0.5 to about 10%, the amounts recited are indefinite because the ranges above are so broad that the combined ingredients can comprise more than 100%, thereby making the amounts claimed indefinite and unsearchable. It is suggested by the examiner that applicants amend the claims so that the amounts of emulsifier and cellulose combined do not exceed about 2 percent. The examiner reminds applicants that any range claimed for

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the emulsifier and cellulose must have support in the specification. To expedite the examining process the examiner only searched the limitation that the amount of flavor oil is about 98 percent and that the flavor system further comprised an emulsifier and cellulose polymer, the examiner did not search for their disclosed ranges since their ranges were indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by El-Nokaly (US 5,599,555 cited in previous office action). This new ground of rejection was necessitated by amendment.

El-Nokaly teaches polymeric liquid crystals which are used to deliver nutrients, flavors and other ingredients to food and health care products, the liquid crystals are comprised of A) 0.001-60% active ingredient including edible oils such as peppermint and spearmint oil and B) 40 to about 99.999% of a liquid crystal containing 1) about 10 to about 90 percent solvent (including flavor oils such as peppermint and wintergreen oil), 2) 10-90% polysaccharide (ethyl and hydroxypropyl celluloses are listed specifically) and 3) emulsifiers (fatty acid monoglycerides are specifically mentioned). See col 1 lin 19-24, 39-51, col 4 lin 16-44, col 5 lin 12-23, col 6 lin 35-67, col 7 lin 1-26, col 10 lin 39-54 and claims. Regarding the new limitation that the flavor oil comprises

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about 98 percent of the flavor system, since the active ingredient can be a flavor oil and the solvent in the liquid crystal can also be a flavor oil, from the ranges listed above, the upper limit for the flavor oil in EI-Nokaly could be as high as about 96% (about 60% active ingredient flavor oil and about 40 percent of the liquid crystal comprising about 90 percent flavor oil as the solvent). The examiner could not find a definition within applicants specification on what the term "about" would encompass therefore the examiner defined the word "about" to encompass ± 10 percent which would mean 98 percent flavor oil could be from 88.2 to 99.999% within the examiner calculated range above and within the range of the solvent for the liquid crystal (about 90%) within EI-Nokaly. Even though the examiner did not search the amount of cellulose polymer because the limitation was indefinite (see U.S.C. 112, second paragraph rejection above), the amount of cellulose polymer in the overall composition could be from about 4% (10% cellulose in the liquid crystal which comprises 40% of the total composition) to about 90%, within applicants specified range.

Claim Rejections - 35 USC § 103

Claims 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over EI-Nokaly (US 5,599,555 cited in previous office action). This new ground of rejection was necessitated by amendment.

EI-Nokaly is disclosed above. EI-Nokaly while disclosing the use of emulsifiers in the polymeric liquid crystal the patent is silent on the amount that could be used within the liquid crystal. However, from the amounts cited above for the active and liquid crystal containing solvent and cellulose it is obvious that the amount of emulsifier could fall

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within applicants claimed range (from above the amount of flavor oil could be as high as 96% \pm 9.6% (examiner defined "about" as \pm 10%) while the amount of cellulose could be as low as 4% \pm 0.4%, therefore from the ranges listed above the amount of emulsifier used could be anywhere from 0-10%, within applicants claimed range. Besides the above arguments for the amount of emulsifier, several examples such as emulsified spreads (margarine/butter) within El-Nokaly used emulsifiers in the range cited by applicants, therefore one skilled in the art could reasonably ascertain that those disclosed percentages would be advantageous to use in the polymeric liquid crystals disclosed or in other applications employing the polymeric liquid crystals. Besides the arguments above on the amounts of the claimed ingredients in applicants invention it is the position of the examiner that generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969).

Conclusion

No claims are allowed at this time.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Rogers, Ph.D. whose telephone number is (571) 272-7838. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on (571) 271-0616. The fax phone number for the organization where this application or proceeding is assigned is 572-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MICHAEL G. HARTLEY
SUPERVISORY PATENT EXAMINER